Stomatopods









The meanest, coolest, and fanciest.

Throughout 2015, this newsletter has been featuring an upclose-and-personal profile of some of the lesser known, but equally cool and compelling invertebrates that make up the marine benthic community on our coral reefs. This quarter we are taking on stomatopods. Arguably, one of the meanest, coolest, and fanciest critters on the planet! Why? Read on and decide for yourself.

Stomatopods, commonly called mantis shrimp, are crustaceans just like lobsters, shrimps, and crabs. There are over 400 species living hidden within burrows of subtropical and tropical shallow marine habitats. Resembling shrimp with flattened and more elongated bodies, stomatopods are characterized by having massive, conspicuous, praying mantis-like "raptorial" claws. The claws are folded under the sides of a hard upper shell or carapace. And as predatory crustaceans, these claws come in handy.

Their claws are morphologically modified for spearing, stunning, crushing, or dismembering prey. Stomatopods adapted for crushing, sport claws shaped like blunt clubs which they use to attack snails, crabs, molluscs, and rock oysters. Spearers have claws with sharp barbed teeth-like structures to snag and slice the meat of softer animals, like fish. Some of the larger species in captivity have been known to strike with such force that they actually break the glass of aquaria after eating everything in the tank.

So stomatopods are mean. But what makes them cool? Check out their T-shaped moveable eyes (see bottom). Their vision is extraordinary as they can see colors that no other species can even imagine. Humans, for example, only have three types of color receptive cones, while stomatopods have 16 types. Mantis shrimp can even see ultraviolet light!

Maybe we've convinced you that stomatopods are both mean and cool... but fancy? Many species are adorned with amazing coloration. For example, one species is so vibrant, its common name is the peacock mantis shrimp (Odontodactylus scyllarus, left). Some species even use fluorescent patterns on their bodies to actually send signals to others.

Alright, so you're thinking that "fancy" and "mean" are subjective and anthropomorphic. Fair enough, but you've got to admit... Stomatopods are pretty cool.

-S. A. McKenna, NPS PACN Marine Ecologist